

DoD Global, Laboratory-Based, Influenza Surveillance Program



USAF School of Aerospace Medicine

2014 - 2015

Cumulative Results

Season

Locations	58
Collected	521
Tested	420



Respiratory Highlights

26 October - 8 November 2014 (Surveillance Week 44 & 45)

- During 26 October to 8 November 2014, a total of 159 specimens were collected and received from 45 locations. Results were finalized for 96 specimens from 39 locations. During Week 44, seven influenza A(H3N2) were identified. During Week 45, five influenza A(H3N2) and one influenza B were identified. See Table 1 below for results of other respiratory viruses.
- As of 10 November 2014, USAFSAM received 83 specimens from 15 bases requesting EV-D68 testing. Fifty-two specimens tested positive for Rhinovirus/Enterovirus on multiplex PCR. Results are available from 30 specimens submitted to the CDC for EV-D68 testing; two are pending shipment. Of these 30 specimens, 12 tested positive for EV-D68, five tested positive for rhinovirus, and 13 tested negative for EV-D68. USAFSAM will forward all specimens to the CDC that come in with an EV-D68 concern and test positive for Rhinovirus/Enterovirus on multiplex PCR.

Table 1. Results by region and location for specimens collected and finalized during Week 44 & 45

Region*		A(H3N2)	B	Adenovirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Corona & RSV	No Pathogen	Total
PACOM	CFA Okinawa, Japan	-	-	-	-	-	-	-	-	3	-	3
	Eielson AFB, AK	1	-	-	-	-	-	-	-	-	-	1
	JB Elmendorf-Richardson, AK	3	-	-	-	-	-	-	-	-	-	3
	JR Marianas - Andersen AFB, Guam	2	-	-	1	-	-	1	-	-	-	4
	Osan AB, South Korea	-	-	-	-	-	-	-	-	1	1	1
Region 1	Hanscom AFB, MA	-	-	-	-	-	-	-	-	1	1	1
	NHCNE Newport, RI	-	-	-	-	-	-	-	-	2	2	2
Region 2	Ft Drum, NY	-	-	-	1	1	-	2	-	2	6	6
	USMA - West Point, NY	-	-	-	-	-	-	2	-	8	10	10
Region 3	NCMR - Ft Belvoir CH, VA	-	-	-	-	-	-	-	1	-	1	1
	Columbus AFB, MS	-	-	-	-	-	-	-	-	1	1	1
Region 4	JB Charleston (AF), SC	1	-	-	-	-	-	-	-	-	-	1
	JB Charleston (Navy), SC	-	-	-	1	-	-	-	-	-	-	1
	Keesler AFB, MS	-	-	-	-	-	-	-	-	1	1	1
	Maxwell AFB, AL	-	-	-	-	-	-	-	-	1	1	1
	Moody AFB, GA	1	-	1	-	1	-	-	-	-	-	3
	NH Camp Lejeune, NC	-	-	-	-	-	-	-	-	1	1	1
	NH Jacksonville, FL	-	-	-	-	-	-	1	-	-	-	1
	Robins AFB, GA	-	-	-	-	-	-	-	-	1	1	1
	Seymour Johnson AFB, NC	1	-	-	-	1	-	3	-	1	6	6
	Tyndall AFB, FL	3	1	-	-	1	-	-	-	1	6	6
	Region 5	-	-	-	-	-	-	-	-	2	2	2
	Wright-Patterson AFB, OH	-	-	-	-	-	-	-	-	1	1	1
Region 6	Altus AFB, OK	-	-	-	-	-	-	1	-	-	-	1
	Laughlin AFB, TX	-	-	1	-	-	-	-	-	-	-	1
	Little Rock AFB, AR	-	-	-	-	-	-	-	-	1	1	1
	Sheppard AFB, TX	-	-	-	-	-	-	-	-	1	1	1
	Tinker AFB, OK	-	-	-	-	-	-	2	-	-	-	2
Region 7	Offutt AFB, NE	-	-	-	-	2	-	2	-	4	8	8
Region 8	Buckley AFB, CO	-	-	-	-	-	-	-	-	1	1	1
	Ellsworth AFB, SD	-	-	1	-	-	-	-	-	-	-	1
	EE Warren AFB, WY	-	-	-	-	1	-	-	-	1	2	2
	Peterson AFB, CO	-	-	-	-	-	1	1	-	-	-	2
Region 9	Davis-Monthan AFB, AZ	-	-	-	-	-	-	-	-	3	3	3
	Edwards AFB, CA	-	-	-	-	-	-	-	-	1	1	1
	Luke AFB, AZ	-	-	-	-	-	-	-	-	1	1	1
	Travis AFB, CA	-	-	-	-	1	-	-	-	4	5	5
Region 10	Mt Home AFB, ID	-	-	-	-	-	-	-	-	1	1	1
	NH Bremerton, WA	-	-	-	-	-	-	3	-	2	5	5
Total		12	1	3	2	1	8	2	17	1	49	96

*US Regions are based on Health & Human Services regions. Other locations are defined by COCOM.

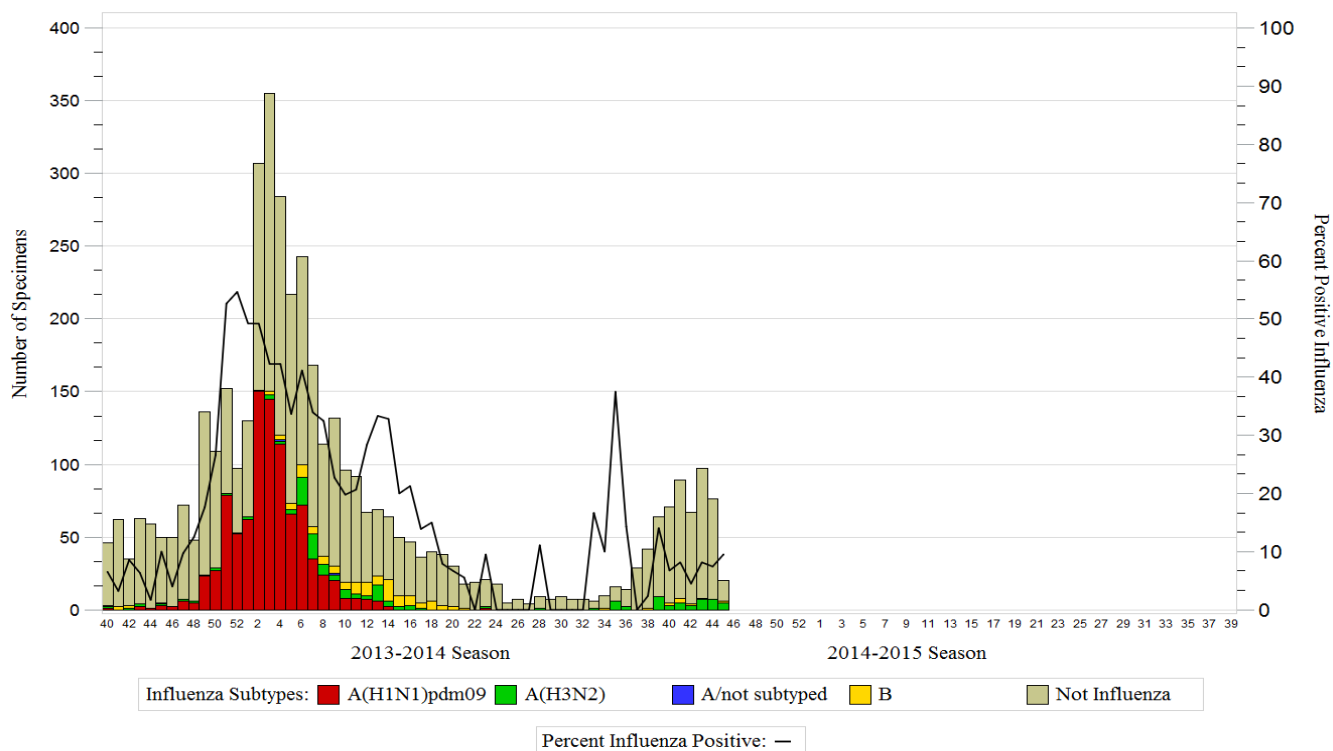
Lab data are current as of 10 November 2014. Results are preliminary and may change as more results are received.

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Email: USAFSAM.PHRFlu@us.af.mil, <https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza>

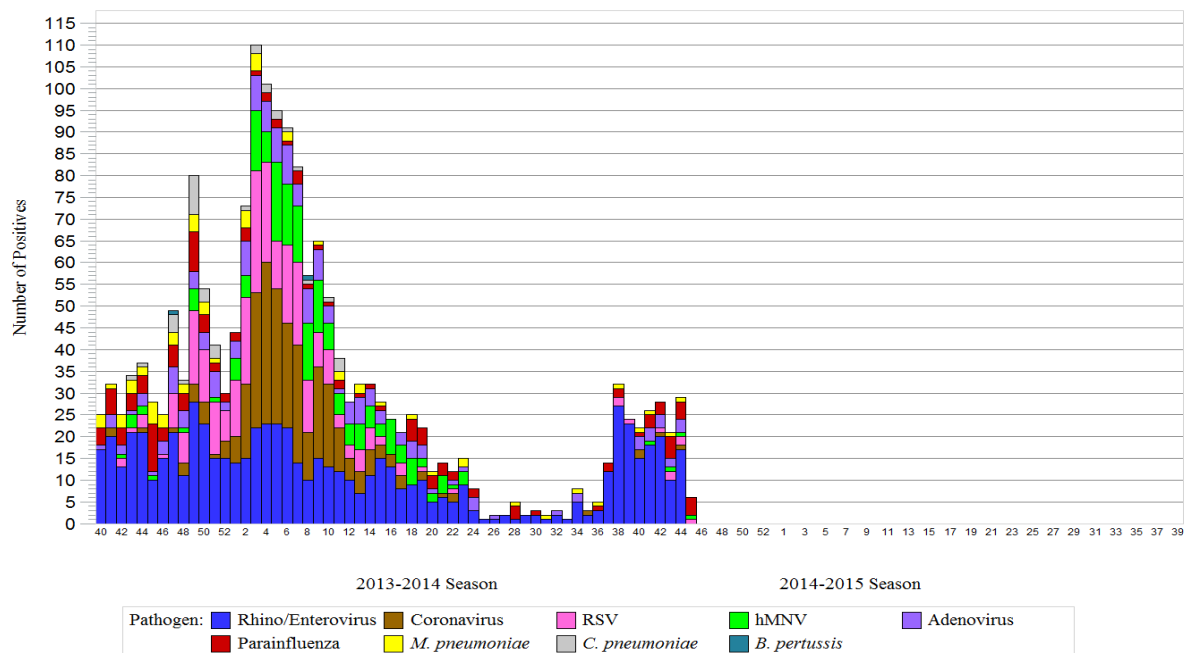
Laboratory Results - Cumulative for Season

Graph 1. Percent influenza positive by week: 2013-2014 surveillance year and through Week 45 of the 2014-2015 surveillance year



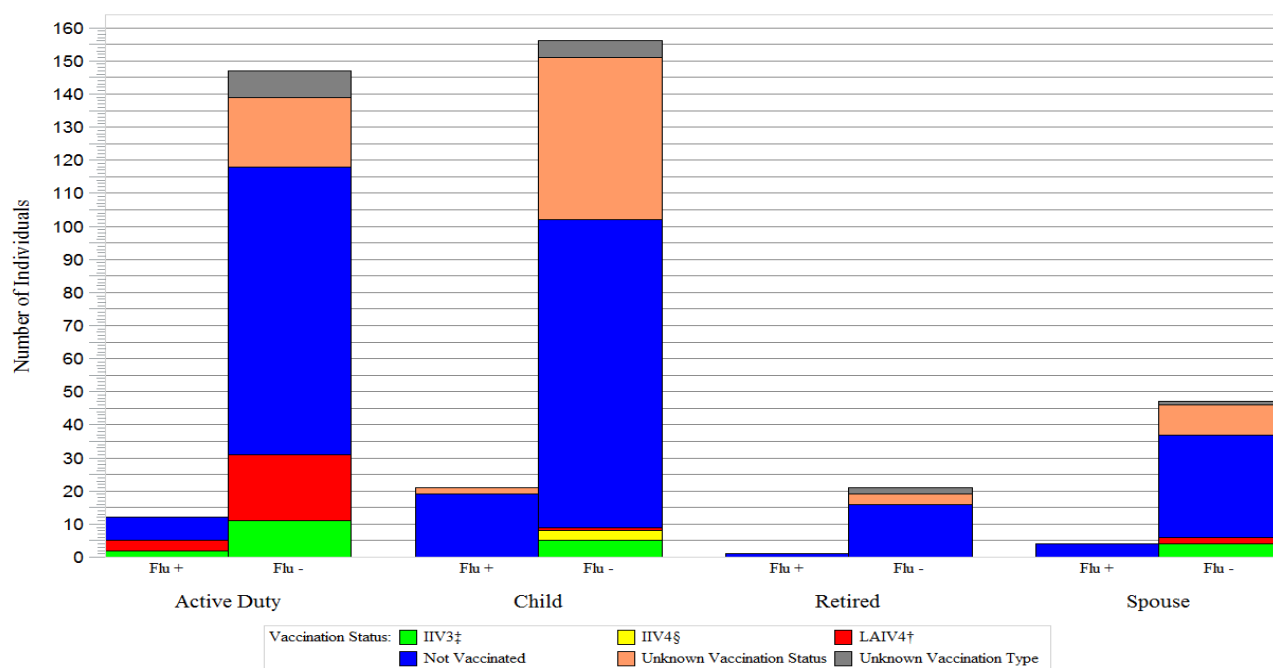
Note: One specimen positive for influenza A(H3N2)v has been excluded from the graph during the 2013-2014 season.

Graph 2. Other respiratory pathogen results by week: 2013-2014 surveillance year and through Week 45 of the 2014-2015 surveillance year



Note: Due to change in protocol between the surveillance years 2013-2014 and 2014-2015, a direct comparison between the years cannot be made.

Graph 3. Vaccination status by beneficiary type for the 2014-2015 surveillance year through Week 45



‡ Influenza, inactivated vaccine (trivalent)

§ Influenza, inactivated vaccine (quadrivalent)

† Live, attenuated influenza vaccine (quadrivalent)

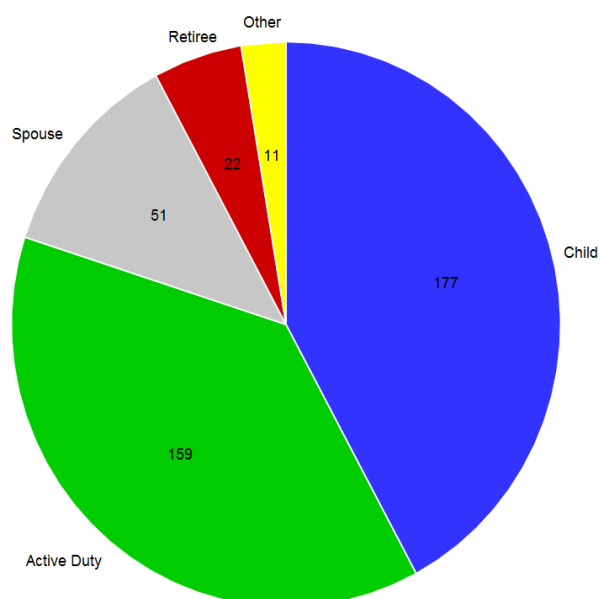
Table 2. ILI by age group for the 2014-2015 surveillance year through Week 45

Age Group	Frequency	Percent
0-5	99	23.57
6-9	42	10.00
10-18	38	9.05
19-24	70	16.67
25-44	124	29.52
45-64	37	8.81
65+	10	2.38

Demographic Summary

Of 420 ILI cases, 159 are service members (37.9%), 177 are children (42.1%), 51 (12.1%) are spouses, and 33 (7.9%) are retirees & other beneficiaries. There are no unknown beneficiary types. The median age of ILI cases with known age (n=420) is 21.0 (range 0, 84) and 179 (42.6%) of these specimens are from ILI cases 18 years of age or younger.

Graph 4. ILI by beneficiary status for the 2014-2015 surveillance year through Week 45



Laboratory Results—Through Current Surveillance Week 45

Table 3. Cumulative results by region and location for specimens collected during the 2014-2015 surveillance year

Region*		A(H2N2)	B	B & Rhino/Entero	Adenovirus	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Co-Infection	No Pathogen	Total
Deployed	Country 1, Location B	-	-	-	-	-	-	-	-	-	-	-	-	4
	Country 2, Location A	-	-	-	-	-	-	-	-	-	-	-	-	7
PACOM	CFA Okinawa, Japan	-	-	-	-	-	-	-	-	-	1	-	-	9
	Eielson AFB, AK	1	1	-	-	-	-	-	-	-	1	-	-	5
	JB Elmendorf-Richardson, AK	4	-	-	-	-	-	-	-	-	-	-	-	6
	JR Marianas - Andersen AFB, Guam	9	3	-	-	-	2	-	1	1	1	-	-	20
	Kadena AB, Japan	-	-	-	-	-	-	-	-	-	1	-	-	1
	Osan AB, South Korea	1	-	-	-	-	-	-	-	-	-	-	-	3
	Yokota AB, Japan	-	-	-	-	-	-	-	-	-	-	1	-	1
Region 1	Hanscom AFB, MA	-	-	-	-	-	-	-	-	-	-	-	-	2
	NHCNE Newport, RI	-	-	-	-	-	-	-	-	-	1	-	-	6
	USCG Academy, CT	-	-	-	-	-	-	-	1	-	1	-	-	4
Region 2	Ft Drum, NY	-	1	-	1	-	-	1	2	-	6	3	-	31
Region 3	USMA - West Point, NY	-	-	-	-	-	-	-	1	-	4	-	-	24
	JB Andrews, MD	-	-	-	-	-	-	-	-	-	2	-	-	3
	JB Langley-Eustis, VA	-	-	-	-	-	-	-	1	-	-	1	-	7
Region 4	NCRM - Ft Belvoir CH, VA	-	-	-	1	-	-	-	-	-	4	1	-	10
	Columbus AFB, MS	-	-	-	-	-	-	-	-	-	-	-	-	4
	Eglin AFB, FL	-	-	-	-	-	-	-	-	-	1	-	-	7
	Ft Campbell, KY	-	-	-	-	-	-	-	-	1	1	-	-	4
	Hurlburt Field, FL	-	-	-	-	-	-	-	-	-	-	-	-	2
	JB Charleston (AF), SC	1	-	-	-	-	-	-	-	-	-	-	-	1
	JB Charleston (Navy), SC	-	-	-	-	-	1	-	-	-	2	-	-	4
	Keesler AFB, MS	-	-	-	-	-	-	-	-	-	-	-	-	2
	MacDill AFB, FL	-	-	-	-	-	-	-	-	-	-	-	-	3
	Maxwell AFB, AL	2	-	-	-	-	-	-	-	-	2	-	-	12
	Moody AFB, GA	2	-	-	2	1	1	-	1	-	3	-	-	13
	NH Beaufort, SC	-	-	-	-	-	-	-	-	-	-	1	-	1
	NH Camp Lejeune, NC	-	-	-	-	-	-	-	-	-	1	-	-	4
	NH Jacksonville, FL	1	-	-	1	-	-	-	-	-	4	1	-	7
	Robins AFB, GA	-	-	-	-	-	-	-	-	-	-	-	-	5
	Seymour Johnson AFB, NC	1	-	-	-	-	-	-	1	-	4	-	-	8
	Shaw AFB, SC	-	-	-	-	-	-	-	-	-	1	-	-	1
	Tyndall AFB, FL	4	2	-	-	-	-	-	1	-	-	-	-	10
Region 5	Scott AFB, IL	1	-	-	-	-	-	-	-	-	-	-	-	4
Region 6	Wright-Patterson AFB, OH	-	-	-	-	-	-	-	-	-	3	-	-	9
	Altus AFB, OK	-	-	1	-	-	-	-	-	-	2	1	-	11
	Cannon AFB, NM	-	-	-	-	-	-	-	-	-	-	-	-	2
	Laughlin AFB, TX	-	-	-	1	-	-	-	-	-	-	-	-	4
	Little Rock AFB, AR	1	-	-	-	-	-	-	-	-	-	-	-	6
	Sheppard AFB, TX	-	-	-	-	-	-	-	-	-	-	-	-	5
	Tinker AFB, OK	-	-	-	-	1	-	-	1	-	2	-	-	23
Region 7	Offutt AFB, NE	-	-	-	-	-	-	-	3	-	4	-	-	17
Region 8	Buckley AFB, CO	-	-	-	-	-	-	-	-	-	1	-	-	3
	Ellsworth AFB, SD	-	-	-	1	-	-	-	-	-	1	-	-	6
	FE Warren AFB, WY	-	-	-	-	-	-	-	1	-	1	-	-	8
	Hill AFB, UT	-	-	-	-	-	-	-	2	-	1	-	-	6
	Minot AFB, ND	-	-	-	-	-	-	-	-	-	1	-	-	1
	Peterson AFB, CO	-	-	-	-	-	-	-	1	1	3	1	-	15
	USAF Academy, CO	-	-	-	-	-	-	-	-	-	1	-	-	2
Region 9	Davis-Monthan AFB, AZ	-	-	-	-	-	-	-	-	-	-	-	-	10
	Edwards AFB, CA	-	-	-	-	-	-	-	-	-	-	-	-	2
	Luke AFB, AZ	-	-	-	-	-	-	-	-	-	-	-	-	3
	Nellis AFB, NV	-	-	-	1	-	-	-	-	-	-	-	-	3
	Travis AFB, CA	1	-	-	-	-	-	-	3	2	5	-	-	36
Region 10	Fairchild AFB, WA	-	-	-	-	-	-	-	-	-	-	-	-	1
	Mt Home AFB, ID	1	-	-	-	-	-	-	-	-	-	-	-	2
	NH Bremerton, WA	-	-	-	-	-	-	-	-	-	4	-	-	10
Total		30	7	1	8	2	4	1	20	5	70	10	262	420

*US Regions are based on Health & Human Services regions. Other locations are defined by COCOM.

Graph 5. Influenza immunization status: Percent immunized by service‡

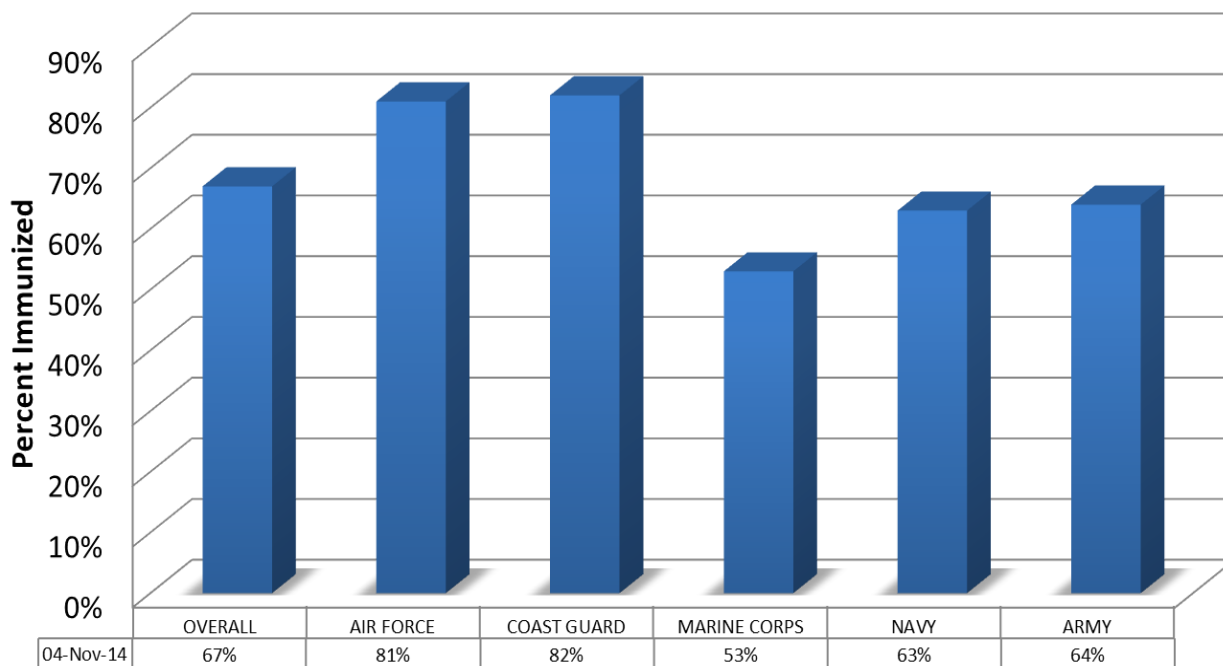


Table 4. Influenza immunization status: Percent immunized by service‡

IMMUNIZATION TYPE	# REQUIRED	# COMPLETED VACCINATIONS	% COMPLETED VACCINATIONS	DATA SOURCE
ARMY ACTIVE DUTY	501,278	373,667	75%	
ARMY GUARD	342,186	206,136	60%	
ARMY RESERVE	179,569	80,048	45%	
TOTAL	1,023,033	659,851	64%	MEDPROS
AIR FORCE ACTIVE DUTY	300,712	250,661	83%	exemptions are included in # completed vaccinations column
AIR FORCE GUARD	91,437	71,110	78%	
AIR FORCE RESERVE	34,202	25,147	74%	
TOTAL	426,351	346,918	81%	AFCITA
MARINES ACTIVE DUTY	165,547	84,665	51%	
MARINES RESERVE	26,233	16,229	62%	
TOTAL	191,780	100,894	53%	MRRS
NAVY ACTIVE DUTY	288,467	176,304	61%	
NAVY RESERVE	53,579	38,111	71%	
TOTAL	342,046	214,415	63%	MRRS
COAST GUARD ACTIVE DUTY	40,387	34,179	85%	
COAST GUARD RESERVE	7,477	5,240	70%	
TOTAL	47,864	39,419	82%	MRRS
TOTAL	2,031,074	1,361,497	67%	
RESERVE COMPONENT TOTAL	734,683	442,021	60%	
ACTIVE DUTY TOTAL	1,296,391	919,476	71%	

‡Courtesy of DHA Immunizations

DoD Global Laboratory-Based Influenza Surveillance Program



USAF School of Aerospace Medicine

2014 - 2015

Respiratory Surveillance
2014-2015 Year
(beginning 28 September 2014)



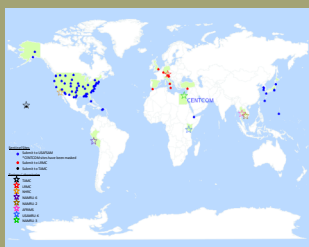
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Contributions to the CDC for National Influenza Surveillance

All sequence data are sent to the CDC and selected original specimens or isolates are sent for further characterization and possible use as influenza vaccine seed viruses. Specimens may also undergo antiviral testing.

[DoD Global Influenza Surveillance Program](https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza)

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Background

The DoD-wide program was established by the Global Emerging Infections Surveillance and Response System (GEIS) in 1997. The surveillance network includes the U.S. Air Force School of Aerospace Medicine (USAFSAM) (sentinel site respiratory surveillance), the Naval Health Research Center (recruit and shipboard population-based respiratory surveillance), the Naval Medical Research Unit (NAMRU-3) in Cairo, Egypt, the Naval Medical Research Unit (NAMRU-2) in Phnom Penh, Cambodia, the Armed Forces Research Institute of Medical Sciences (AFRIMS) in Bangkok, Thailand, the Naval Medical Research Unit-6 (NAMRU-6) in Lima, Peru, and the United States Army Medical Research Unit-Kenya (USAMRU-K) located in Nairobi, Kenya. This work is supported by the Air Force and the Division of Global Emerging Infections Surveillance and Response System (GEIS) Operations, a Division of the Armed Forces Health Surveillance Center (AFHSC).

Sentinel Site Surveillance at USAFSAM

In 1976, the U.S. Air Force Medical Service began conducting routine, global, laboratory-based influenza surveillance. Air Force efforts expanded to DoD-wide in 1997. USAFSAM manages the surveillance program that includes global surveillance among DoD beneficiaries at over 80 sentinel sites (including deployed locations) and many non-sentinel sites (please see map on the left). Unique sentinel sites include three DoD overseas medical research laboratories (AFRIMS, NAMRU-6, USAMRU-K) and the US Army Public Health Command Region South (PHCR-S). These sites collect specimens from local residents in surrounding countries that may not otherwise be covered in existing surveillance efforts.

Since the 2006-2007 season, Landstuhl Regional Medical Center (LRMC) has served EUCOM as a USAFSAM contributing laboratory. The initiative seeks to provide more timely results and efficient transport of specimens.

For an expanded view of this report, visit our website. Also available on the website is a list of previous weekly surveillance reports, program information (including an educational briefing and instruction pamphlets for clinic staff), and an overview of historical data. Please visit the AFHSC/GEIS website for an overview of influenza surveillance at all collaborating organizations.

Errata:

Collaborating Partners

In addition to all participating DoD military sentinel sites, several collaborating partners (described above) may be further understood by reviewing the partner's website.



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